

云南粗叶木属一新亚种及其生物地理学意义

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A new subspecies of the genus *Lasianthus* Jack (Rubiaceae) from Yunnan with reference to its biogeographical implication

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Key words *Lasianthus rhinocerotis* subsp. *xishuangbannaensis*; New subspecies; Biogeography; Yunnan

关键词 版纳粗叶木; 新亚种; 生物地理; 云南

版纳粗叶木 新亚种

Lasianthus rhinocerotis Bl. subsp. *xishuangbannaensis* H. Zhu et H. Wang, subsp. nov.

Fig. 1

A typo ramulis juvenibus patenter sparseque hirtis, vetustis glabrescentibus, foliis chartaceis, costis et nervis subtus patenter sparseque hirtis, nervulis subreticulatis, stipulis sparse hirtis differt; a subsp. *pedunculato* (Pitard.) H. Zhu ramulis juvenibus patenter sparseque hirtis, vetustis glabrescentibus, foliis chartaceis basi rotundis vel subcordatis, nervis lateribus utrinque 7~8, costis et nervis subtus patenter sparseque hirtis, stipulis anguste triangularibus sparse hirtis, bracteis tenuibus differt.

China. Yunnan(云南): Xishuangbanna (西双版纳), Mengsoon (勐宋), alt. 1600 m, in forest, H. Zhu et H. Wang (朱华、王洪), 98-11-01 (holotype! HITBC).

Thailand(泰国). Central Thailand, alt. 1200 m, H. Zhu (朱华) 91-5-12-01 (HITBC); Nan, Tirvengadum *et al.* 2013 (AAU).

This subspecies differs from the typical one in having branches sparsely hairy when young but later glabrescent, chartaceous leaves with nerves 7~8 paired, subreticulate nervules, and sparse hairs on nerves beneath and stipules. It differs from *L. rhinocerotis* Bl. subsp. *pedunculatus* (Pitard) H. Zhu also in having branches sparsely hairy when young but later glabrescent, chartaceous leaves with rounded or slightly cordate bases, sparse hairs on nerves beneath, angustitriangular stipules, and gracile bracts.

The typical subspecies occurs in southern Thailand, Malaysia and Indonesia (Java, Sumatra

tion pattern of the species *L. rhinocerotis* and its subspecies could be better explained, and vice versa.

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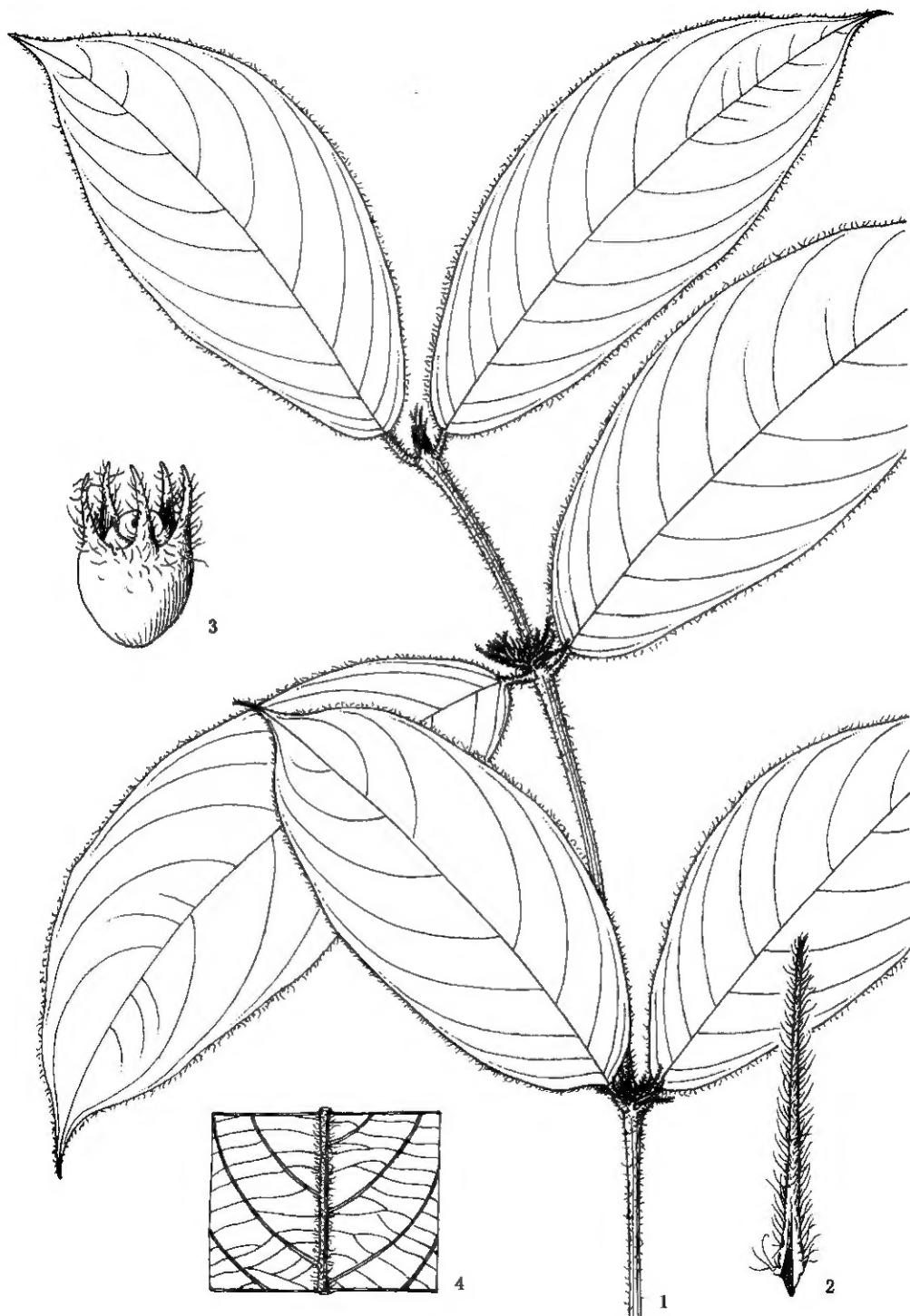


Fig. 1 *Lasianthus rhinocerotis* subsp. *xishuangbannaensis*
1. Fruiting branch; 2. Bract; 3. Fruit; 4. Lower surface of a leaf(enlarged) (吴锡麟 绘)

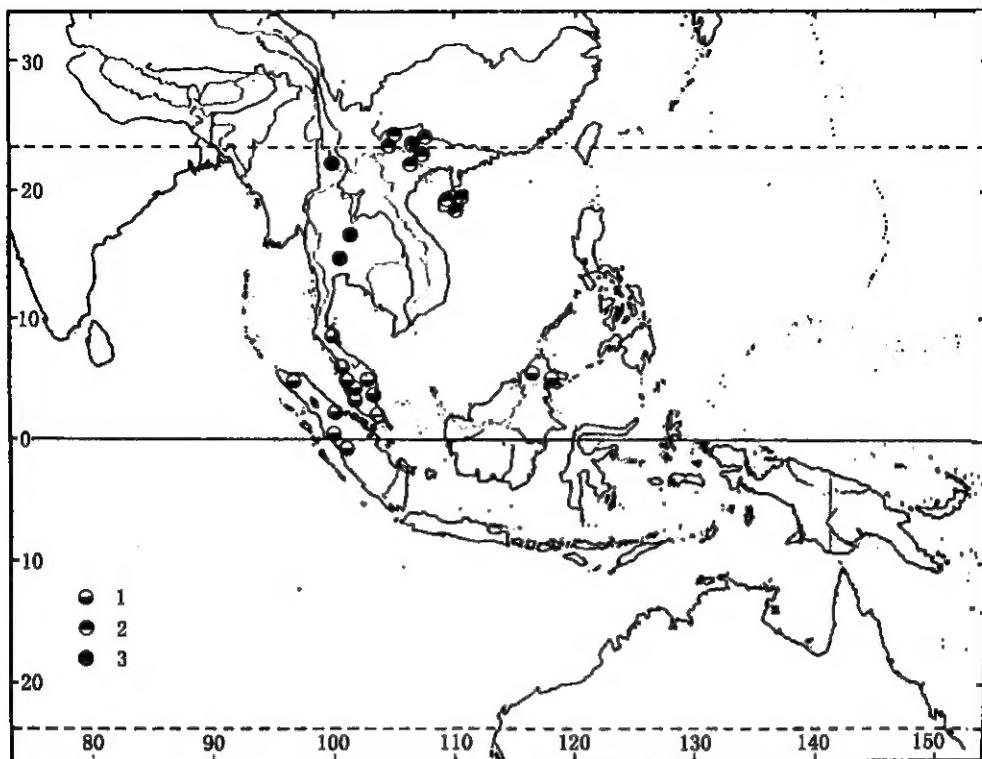


Fig. 2 Distribution of the species *Lasianthus rhinocerotis* and its subspecies

1. *L. rhinocerotis* subsp. *rhinocerotis*; 2. *L. rhinocerotis* subsp. *pedunculatus*; 3. *L. rhinocerotis* subsp. *xishuangbannaensis* and Kalimantan). The subspecies *pedunculatus* occurs in northern Vietnam, SE Yunnan, SW Guangxi and Hainan of China. It is interesting that our new subspecies from northern Thailand and Yunnan is more similar to the typical one, especially to the specimens from Kalimantan in morphological characteristics (Fig. 2).

Mainland SE Asia was a complex of geological fragments. Indochina-SE China was originally from Laurasia, while India-Myanmar was originally from Gondwana (Metcalfe 1998, Audley-Charles 1987). “Tanaka line”, running from NW Yunnan to SE Yunnan, was supposed to be a plant geographical demarcation (Li & Li 1992, Tanaka 1954). This is partially supported by geology because the western side of the line was mostly derived from Gondwana, while the eastern side of the line was from Indo-China plate of Laurasia. A similar opinion was given based on a research of the flora of SW Yunnan by Li (1994), who suggested that S Yunnan and N Thailand was a part of Shan-Thai-Malay plate of Gondwana. These suggestions are supported by the distribution of the species *L. rhinocerotis* and its subspecies. Based on the studies on the tropical vegetation and flora of S Yunnan, we would suggest that the tropical flora of S Yunnan has close affinity to the flora of SE Asia (Zhu 1997, 1995, 1994, Zhu *et al.* 1997). Direct land connection between mainland SE Asia and W Malesia could be existent until early Pliocene (5 Ma ago) (Hall 1998) and there was no geographical barrier to natural distribution of plants between mainland SE Asia and W Malesia during most of the Tertiary (Morley 1998). Based on the geological evolution of SE Asia, the distribu-